

## CLAIMS

1. A method of conducting homologous recombination, which is characterized in that it comprises the following steps (a) and (b):

5 (a) a step of preparing cells wherein a decrease or loss of the functions of a gene necessary for non-homologous recombination is induced; and

(b) a step of introducing foreign DNA into said cells, so as to conduct homologous recombination.

2. The method according to claim 1, which is characterized in that said decrease or  
10 loss of the functions of a gene necessary for non-homologous recombination is achieved by introducing a mutation or deletion into the gene necessary for non-homologous recombination that exists in the cells.

3. The method according to claim 1, which is characterized in that said decrease or  
15 loss of the functions of a gene necessary for non-homologous recombination is achieved by disrupting the gene as a whole necessary for non-homologous recombination that exists in the cells.

4. The method according to any one of claims 1 to 3, which is characterized in that said step of introducing foreign DNA is achieved by any one of the electroschock method, the spheroplast method, and the Ti plasmid method.

20 5. The method according to any one of claims 1 to 4, which is characterized in that said gene necessary for non-homologous recombination is a gene selected from the group consisting of at least KU70, KU80, LigIV, DNA-PKcs, and XRCC4.

6. The method according to any one of claims 1 to 5, which is characterized in that said cells are eukaryotic cells.

25 7. The method according to claim 6, which is characterized in that said eukaryotic cells are cells selected from the group consisting of at least animal cells, plant cells, and fungal cells.

8. The method according to claim 7, which is characterized in that said fungal cells

are filamentous fungi.

9. The method according to claim 8, wherein said filamentous fungi belong to any one of genus *Neurospora*, genus *Aspergillus*, genus *Penicillium*, genus *Fusarium*, genus *Trichoderma*, and genus *Mucor*.

5 10. The method according to claim 9, wherein said filamentous fungi belonging to genus *Neurospora* is one type selected from the group consisting of at least *Neurospora crassa*, *Neurospora sitophila*, *Neurospora tetrasperma*, *Neurospora intermedia*, and *Neurospora discreta*.

11. Cells prepared in said step (a) of the method according to claim 1.

10 12. Cells obtained by the method according to any one of claims 1 to 10.